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NAS WHITING FIELD
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PLAN OF ACTION FOR REMEDIAL INVESTIGATIONS AT OUTLYING LANDING FIELD
BARIN NAS WHITING FIELD FL
3/1/1995
ABB ENVIRONMENTAL



PLAN OF ACTION

REMEDIAL INVESTIGATION

**OUTLYING LANDING FIELD (OLF) BARIN
FOLEY, ALABAMA**

**UNIT IDENTIFICATION CODE: 60508
CONTRACT NO. N62467-89-D-0317/0031
PLAN OF ACTION NO. 08526.19**

MARCH 1995



**SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORTH CHARLESTON, SOUTH CAROLINA
29419-9010**

PLAN OF ACTION

Remedial Investigation

**Outlying Landing Field (OLF) Barin
Foley, Alabama**

Unit Identification Code: 60508

Contract No. N62467-89-D-0317/0031

Plan of Action No. 08526.19

Submitted by:

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March 1995

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I. INTRODUCTION

On January 12, 1995, Mr. Ray Butka, Engineer-in-Charge (EIC) at Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), requested that ABB Environmental Services, Inc. (ABB-ES), prepare a Plan of Action (POA) for Statement of Work (SOW), Modification No. 6, to Contract Task Order (CTO) No. 0031 for the Remedial Investigation at Outlying Landing Field (OLF) Barin, Foley, Alabama. This submittal constitutes ABB-ES' POA and cost estimate for additional investigations of (1) the extent of lead contamination in groundwater at Site 19B/20B and (2) the presence of mercury in groundwater at Site 26B, as well as providing support for removal actions at Sites 19B and 24B, being conducted by the Remedial Action Contract (RAC) contractor Morrison Knudsen (MK) under Contract N62467-93-D-1106, delivery order 0013.

This POA describes the scope of services, schedule, and estimated costs to meet the objectives of the SOW. ABB-ES projects that the new effort will be completed in January 1996 and, therefore, will not affect the existing completion date for the CTO as a whole. Costs for the new work effort have been estimated based on previous tasks completed at the facility. The tasks included in this proposal, and their associated work breakdown structure (WBS) codes, are as follows.

SDIV SOW No.	ABB-ES Task No.	WBS Code No.	Task Name and Description
	1	01	Project management
	1.1	01	Day-to-day management
	1.2	01	Site visit
	1.3	01	Meetings
	2	05	Field preparation
	3	05	Field work
2.1/2.2	3.1	05	Monitoring well installation
2.2	3.2	05	Surface and subsurface soil sampling
2.1	3.3	05	Groundwater sampling
	3.4	05	Water level survey
	3.5	05	Locational survey
2.4	3.6	05	Post-removal confirmatory sampling
2.3	4	07	Data validation and management
	5	09	Report preparation
2.4	5.1	09	Performance criteria plans (two)
	5.2	09	Final closure reports (two)
2.4	5.3	09	Data assessment

In completing this POA, the assumption was made that both removal actions completed at the facility would be conducted under Alabama underground storage tank (UST) program guidelines. In the event that the sites do not qualify under the Alabama UST program, the removal actions will be conducted according to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) guidance for non-time critical removal actions and modifications to the project costs and schedule will be required.

Task 1 - Project Management. ABB-ES will provide project management services consistent with the needs of the project. Project management is currently funded under CTO 031 through May 1996, and the effort estimated herein does not duplicate already-funded project management support.

The Task Order Manager (TOM) will continue to provide general oversight for the duration of this CTO. The Project Assistant (PA), newly promoted to the position of Associate Project Manager (APM), will assume greater day-to-day management responsibilities, ensuring adherence to project scope, schedule, and budget.

Costing for the APM can be found under the Project Assistant labor category until such time that the new labor category of APM is proposed by ABB-ES and accepted by the Navy.

Subtask 1.1 - Day-to-Day Management The completion of five additional document deliverables requires additional management support to coordinate the personnel and activities necessary to meet scope, schedule, and budget. An Alabama-registered engineer will be incorporated into the project team and will review the project history so that he/she may participate in report preparation before signing and sealing the performance criteria plans (corrective action plans) and the final closure reports (corrective action effectiveness reports) as required by Alabama regulations. The APM will coordinate the draft and final submittals of the new deliverables.

Subtask 1.2 - Site Visit and Subtask 1.3 - Meetings In addition to regular project management duties, ABB-ES will attend meetings with the Navy and regulatory agencies, as appropriate. It is estimated that for this SOW, the APM, Technical Leader, and Senior Engineer will support and attend one additional site visit and two organizational meetings specifically to address the removal actions and coordination of clean-up efforts between ABB-ES and the RAC contractor. The costing for this task, therefore, will include the associated travel costs for a 1-day trip to Foley, Alabama, and two 1-day trips to Charleston, South Carolina. Labor is estimated including travel and meeting preparation time.

Task 2 - Field Preparation. The field preparation task provides all efforts necessary to effect the field work tasks. It is anticipated that the field work part of the project will require approximately 3 weeks to complete. The level of effort (LOE) for this task includes finalization of the scope of work, scheduling of the field effort and personnel, and tasks associated with procurement of subcontractors (drilling, laboratory, survey, data validation, and investigation-derived waste (IDW) management). Expendable supply costs (equipment) to support all field efforts envisioned hereunder are also included in Task 2.

Task 3 - Field Work.

Subtask 3.1 - Monitoring Well Installation Six monitoring wells will be installed by subcontract personnel at the OLF Barin facility. Three of the monitoring wells will be installed along the facility boundary north of Sites 19B and 20B, Former Hanger Maintenance Area and Abandoned UST and Fuel Pit Area, respectively. These wells will be used to further characterize the extent of groundwater contamination. One temporary well will be installed downgradient of Site 26B, Abandoned Wastewater Treatment Plant, to investigate the potential presence of inorganic compounds in the groundwater. Two

wells will be installed downgradient of the potential UST location as part of the removal action at Site 19B. This task will be completed in accordance with the procedures presented in the Remedial Investigation (RI) workplan. A three-person field team will provide subcontractor oversight and collect subsurface soil samples for lithologic descriptions during drilling operations. The duration of this task is estimated to be 4 days.

Subtask 3.2 - Surface and Subsurface Soil Sampling The field work task will also include the collection of 20 surface soil samples and 4 subsurface soil samples. Fifteen surface soil samples will be collected from grid locations that correspond with extensions of the grid previously established for Sites 22B and 25B, Old Firefighting Demonstration Area and Machine Gun Butt Area, respectively. Five additional samples will be collected from the surface of the soil mound at Site 25B.

Two soil borings will be completed at surface soil grid locations where previous analytical results indicated elevated lead concentrations. At each soil boring location, subsurface soil samples will be collected at depths of 0 to 6 inches below land surface (bls), 1 to 2 feet bls, and 2 to 3 feet bls. The surface and subsurface soil samples will be collected to further delineate the horizontal and vertical extent of contamination.

Procedures for the collection of environmental samples are outlined in the RI workplan for OLF Barin. This task will be completed by a three-person field team, consisting of the Senior Scientist (Field Operations Leader), an Engineer, and a Geologist. The duration of this task is estimated to be 2 days.

Subtask 3.3 - Groundwater Sampling Groundwater samples will be collected from each of the six newly installed monitoring wells and from two previously installed monitoring wells (WHF-19B-MW-4S and WHF-19B-MW-6S) at Site 19B. Groundwater samples collected from monitoring wells installed for additional characterization at sites 19B and 26B will be analyzed for total and dissolved target analyte list inorganic parameters; low detection limits of antimony, beryllium, and thallium; total dissolved solids (TDS); and total suspended solids (TSS). Groundwater samples collected from monitoring wells to support the removal action (two newly installed monitoring wells and two previously installed monitoring wells) will be analyzed for volatile organic compounds (VOCs) (U.S. Environmental Protection Agency [USEPA] Methods 8100 and 8020) and lead (USEPA Method 239.2).

Groundwater sampling will be completed in accordance with the strategy and field procedures specified in Technical Memorandum 5, RI data summary and workplan for additional investigation, and the procedures specified in the RI workplan. The three-person field team will provide support for this task. The duration of this task is estimated to be 3 days.

Subtask 3.4 - Water Level Survey Depth to groundwater will be measured in new and existing monitoring wells at the facility to supplement the groundwater flow data and to prepare water table contour maps. The measurements will be referenced to the vertical control datum established for the site. LOE for this task is based upon a two person crew measuring water levels for 1/2 day.

Subtask 3.5 - Locational Survey Sampling locations including surface soil, soil borings, and monitoring wells, will be surveyed following completion of the sampling event. The survey will be completed by a subcontractor according to the requirements specified in the RI workplan and detailed in the final POA for Contract No. 031 dated March 1993. The surveyor will provide X and Y coordinates (per the National Geodetic Vertical Datum) of sampling locations in AutoCad™ format for subsequent use in figure and map presentations for deliverables. The Senior Scientist will provide subcontractor oversight for this 1-day event.

Subtask 3.6 - Post-Removal Confirmatory Sampling The RAC contractor, MK, has been tasked with execution of removal actions at Site 19B, Former Hangar Maintenance Area, and Site 24B, Abandoned Firefighting Training Pit. In support of this effort, ABB-ES personnel will perform confirmatory sampling at both sites, after MK has completed the removal actions and initial screening. Confirmatory samples will be sent to the contract laboratory for analyses with a quick turnaround (72 hours). The proposed scope of work includes the collection of 12 soil samples at Site 19B and 5 soil samples at site 24B. Soil samples collected at Site 19B will be analyzed for total petroleum hydrocarbons (TPH) and lead; samples collected at Site 24B will be analyzed for TPH and lead. The duration of this task is estimated to be 5 days.

In the event that confirmatory samples indicate that contamination has not been fully remediated or if the presence of fuel lines indicate a larger area of removal, additional removal actions will be conducted and additional samples will be collected. These additional actions are not included in the costing of this POA. This will be documented by change order.

Task 4 - Data Validation and Management. Data validation will be performed by a subcontractor. After the validated data have been checked by the Senior Chemist, the information will be added to the existing database. Upon completion of data entry, the Senior Chemist will print out the data for further evaluation and the validated data will then be used for report preparation.

Task 5 - Report Preparation. ABB-ES will complete reports for both the removal and field efforts.

Subtask 5.1 - Performance Criteria Plan (PCP) A PCP (corrective action plan) will be completed for each removal site, Site 19B, Former Maintenance Hangar Area; and Site 24B, Abandoned Firefighting Training Pit, at OLF Barin. This plan will include such information as site location and history, potential source of contamination, approximate size of removal area, remedial alternatives, and specifications for contaminant cleanup levels. SOUTHNAVFACENGCOM guidance for PCPs and Alabama guidance for UST corrective actions will be followed as they pertain to format and content. Much of the information contained in the PCP will be used by the RAC contractor in production of a workplan for removal actions at each site. LOE for this task includes report preparation time by a Senior Scientist (Technical Leader on the project), review by a Technical Expert, and production (word processing and copying) time.

Subtask 5.2 - Final Closure Report Upon completion of confirmatory sampling, the RAC contractor will submit a removal action report to SOUTHNAVFACENGCOM and ABB-ES detailing the chronology of events that occurred during the removal action. ABB-ES will use this report, along with the results of the confirmatory sampling, to submit a final closure report for each site, 19B and 24B, to SOUTHNAVFACENGCOM. This report will include as-built drawings of the remedial action system, the field screening sampling results, analytical results for confirmatory samples, water level measurements, soil treatment results, and any modifications to the PCP.

Subtask 5.3 - Data Assessments One data assessment report will be completed to document the additional field and sampling activities and summarize the results for the completed additional investigations of Sites 19B, 22B, 25B, and 26B. It is the intent of ABB-ES to also include this information as an appendix in the decision documents, already specified under the existing scope of work, Modification No. 5, for CTO No. 0031.

II. SCHEDULE

Attachment A includes a Gantt chart presenting the proposed schedule based on calendar days for completion of the tasks described above. The estimated completion date is portrayed in Attachment A, Project Schedule.

III. COST ESTIMATE

Attachment B presents the cost estimate to complete the scope of services described herein. Direct labor has been escalated to its midpoint (see project schedule, Attachment A). Supporting documentation for the travel estimate and other direct costs may be found in Attachment C.

IV. FEE ITEMIZATION FORM SCOPE LIMITATION

The purpose of this paragraph is to clearly define the scope and assumptions made for this fee proposal, should it be necessary to enact provisions delineated at Part VII, paragraph 22, of the subject contract, in accordance with Federal Acquisition Regulations (FAR) 52.243-2.

Specific Parameters:

As outlined in Tasks 1 through 5 of this POA dated March 1995.

Period of Performance Parameters:

Costs presented are estimated to be incurred from Notice to Proceed through the end of the program as shown in Attachment A, Project Schedule.

GLOSSARY

ABB-ES APM	ABB Environmental Services, Inc. Associate Project Manager
bls	below land surface
CERCLA CTO	Environmental Response, Compensation, and Liability Act Contract Task Order
EIC	Engineer-in-Charge
IDW	investigation-derived waste
LOE	level of effort
MK	Morrison Knudsen
OLF	Outlying Landing Field
PA PCP POA	Project Assistant Performance Criteria Plan Plan of Action
RAC RI	Remedial Action Contract Remedial Investigation
SOUTHNAV- FACENCOM SOW	Southern Division, Naval Facilities Engineering Command Statement of Work
TDS TOM TPH TSS	total dissolved solids Task Order Manager total petroleum hydrocarbons total suspended solids
USEPA UST	U.S. Environmental Protection Agency underground storage tank
VOCs	volatile organic compounds
WBS	work breakdown structure

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**INVESTIGATION DERIVED WASTE
MANAGEMENT PLAN**

**OUTLYING LANDING FIELD BARIN
FOLEY, ALABAMA**

Contract No. N62467-89-D-0317\031

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March 1995

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
AOC	area of contamination
ARARs	applicable or relevant and appropriate requirements
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CLEAN	Comprehensive Long-Term Environmental Action, Navy
CLP	USEPA Contract Laboratory Program
CWA	Clean Water Act
DE	disposable equipment
EC	environmental coordinator
EIC	Engineer-in-Charge
FAC	Florida Administrative Code
FDER	Florida Department of Environmental Regulation
FDOT	Florida Department of Transportation
FOL	field operations leader
HDPE	high density polyethylene
HWSF	Hazardous Waste Storage Facility
IDW	investigation-derived wastes
LDR	land disposal restrictions
$\mu\text{g}/\ell$	micrograms per liter
NA	Not Applicable
NAS	Naval Air Station
NCP	National Contingency Plan
NPL	National Priority List
OVA	Organic Vapor Analyzer
PCBs	polychlorinated biphenyls
PID	photoionization detector
PPE	personal protective equipment
RCRA	Resource Conservation and Recovery Act
RI/FS	remedial investigation and feasibility study
SOUTHNAV- FACENCOM SVOC	Southern Division, Naval Facilities Engineering Command semi-volatile organic compound

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GLOSSARY (Continued)

TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TL	technical leader
TOM	task order manager
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound
WWTP	wastewater treatment plant

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1.0 INTRODUCTION

ABB Environmental Services (ABB-ES), Inc., is under contract with Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) Contract No. N62467-89-D-0317 to perform a Remedial Investigation/Feasibility Study (RI/FS) at Outlying Landing Field (OLF) Barin.

When collecting environmental samples to characterize a potential hazardous waste site, a variety of potentially contaminated investigation-derived wastes (IDW) are generated (i.e., soil, groundwater, used personal protective equipment (PPE), disposable equipment (DE), and decontamination fluids). These IDW materials must be managed in a responsible manner that does not leave the site in a worse condition than existed previously or pose an immediate threat to human health or the environment.

1.1 PURPOSE. The intent of this IDW plan is to have a permanent, consistent program for managing waste derived from investigations of identified sites at OLF Barin. Further, this plan will provide guidance to ensure that health and safety, regulatory, and the Naval requirements are satisfied. This plan defines the roles and responsibilities for ABB-ES personnel, ABB-ES subcontractors, and NAS Whiting Field representatives.

1.2 ORGANIZATION OF THE PLAN. The U.S. Environmental Protection Agency's (USEPA) guidance document *Management of Investigation-Derived Wastes During Site Inspections* (USEPA, May 1991) provides detailed information on managing IDW at Superfund sites. This site specific IDW Plan, was developed by extracting the key elements from the USEPA guidance document and provides the general guidelines and sets requirements. Section 2.0 provides site-specific plans for the sites undergoing investigation in the current phase of the RI/FS. Section 3.0 describes the responsibility of each office that is involved in managing IDW and identifies appropriate points of contact.

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2.0 SITE-SPECIFIC IDW PLAN

This section presents the RI site-specific IDW management plan for OLF Barin. Section 2.1 discusses and defines types of IDW expected to be generated at OLF Barin. Disposal options available for each type are also presented. Section 2.2 presents site-specific IDW management and a table depicting the expected disposal methods to be used at each site. Section 2.3 describes equipment and logistics that will be used for IDW management at OLF Barin.

2.1 TYPES OF IDW. The types of IDW expected to be generated during the RI at OLF Barin include: drill cuttings and mud, excavated soils, purge and development water, decontamination fluids, PPE, and DE. The following subsections describe each type of IDW and the available disposal options.

2.1.1 Drill Cuttings and Mud All drill cuttings and mud will be screened at the surface using a flame ionization detector. Any cuttings that contain elevated organic vapors as determined by the Field Operations Leader (FOL) will be segregated. Depending on site conditions, drill cuttings and mud may be disposed of in various ways. Segregated drill cuttings and mud containing elevated organic vapor will be drummed and sampled for disposal. Drill cuttings and mud that do not contain elevated organic vapor will be disposed of onsite.

At isolated sites, drill cuttings and mud will be spread on the ground adjacent to the well where they were generated or buried in a disposal pit located within the area of contamination (AOC). At paved industrial areas (where drill cuttings and mud can not be spread or buried) the drill cuttings and mud from soil borings will be piled into two separate piles (one for saturated soils and one for unsaturated soils) on plastic sheeting at a facility designated onsite area and covered with plastic sheeting.

Industrial Area To determine if the segregated cuttings or mud can be classified as hazardous or nonhazardous, Resource Conservation and Recovery Act (RCRA) hazardous waste criteria will be used. A RCRA solid waste is hazardous if it is

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listed or exhibits a hazardous characteristic. Listed RCRA hazardous wastes include any waste listed in Subpart D of Code of Federal Regulations 40 CFR 261. Characteristic RCRA Hazardous Wastes are any waste exhibiting one of the following characteristics, as defined in 40 CFR 261: ignitability, corrosivity, reactivity or toxicity.

To make the hazardous or nonhazardous determination, one sample will be collected at the end of the drilling program, from each segregated volume and analyzed by a certified CLP Laboratory for TCL VOCs, SVOCs, pesticides and PCBs, TAL inorganics, and total cyanides.

If the results of the TCL and TAL soil analyses exceed 20 times the toxicity characteristic leaching procedure (TCLP) regulatory level for any of the 39 listed contaminants, TCLP analysis will be conducted for those contaminants. If TCLP results indicate a concentration above the regulatory level for any of the 39 listed contaminants, the waste is classified as hazardous and the activity (NAS Whiting Field) will be responsible for appropriate disposal.

If the laboratory results indicate contaminants are below the RCRA hazardous waste criteria, the soils will be transported and spread at a facility designated area of the installation.

Isolated Locations Disposal When disposed of at isolated well locations, drill cuttings and mud will be spread out to prevent a nuisance condition, physical hazard, or drainage problem. The wastes will be placed so that they will not be eroded by surface water and rainfall, and create sediment loads to nearby surface waterways such as ditches, curbs, or swales.

When disposing drill cuttings and mud by burying the USEPA guidance document *Management of Investigation-Derived Wastes During Site Inspections* (EPA/540/G-91/009) will be followed. The document states that "burying RCRA hazardous soil cuttings within the AOC unit, so long as no increased hazard to human health and the environment will be created" is consistent with the NCP and RCRA LDRs. In

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addition, the IDW guidance document also states "containerization and testing are not required for onsite disposal."

For disposal into a pit, a trench will be constructed so that the bottom does not penetrate the water table. If the FOL deems it necessary, the trench will be lined with plastic (10 mil thickness, minimum). Drilling material (cuttings and mud) to be placed in the trench will be screened with a flame ionization detector the same day as the material reaches the surface. After the completion of the soil boring, the IDW (cuttings and mud) will be covered with a plastic liner (10 mil, minimum), then a 6-inch clean fill cover. Additional fill material will be purchased if the amount of soil remaining from the trench construction is insufficient to completely cover the pile. The trench will be seeded with grass seed to prevent erosion.

Soil removed during the excavation of a test pit will be returned to the excavation upon completion of the exploration. Once the excavation has been filled, the surface will be leveled to grade and will be seeded with grass seed to prevent erosion.

Drummed Drill Cuttings or Mud In the event any drill cuttings or mud are drummed, the drummed materials left by field personnel at the site will become the property of NAS Whiting Field. ABB-ES will maintain a log of the drums and will clearly identify the containers using weather-resistant labels. The labels indicate the drum contents, site and sample location number, date filled, and corresponding log entry number. NAS Whiting Field will take responsibility for the drums and their contents.

The materials will be handled, transported, and disposed of according to Applicable or Relevant and Appropriate Requirements (ARARs) for IDW. The ARARs may include RCRA, the CWA, the Toxic Substances Control Act (TSCA), and/or any other existing State regulations. Non-hazardous (non-contaminated) materials will either be returned to the site from which they originated and disposed onsite or will be properly disposed of off site, as appropriate.

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2.1.2 Purge and Development Water Purge and development water will be disposed by pumping on the ground within the AOC or by drumming and pumping into a tanker truck. If RCRA non-hazardous, liquid waste will be pumped on the ground downgradient of the well within the area of contamination (AOC) and allowed to percolate into the soil, care will be taken to assure that the liquid waste does percolate into the ground and does not flow into surface waterways such as ditches, curbs, or swales. Purge and development water from monitoring wells that appear to be free of contamination (based on OVA readings) but have no analytical data, will be pumped from the wells into 55-gallon drums and transported and emptied into a tanker truck. Purge and development water from contaminated monitoring wells (based on existing analytical data or elevated OVA readings) will be drummed and emptied into a second 10,000 gallon tanker. Once either tanker is full, a water sample will be collected by the activity and analyzed for TCL VOCs, SVOCs, pesticides and PCBs, TAL inorganics, and total cyanides (Level V DQOs). If the laboratory results indicate contaminants are below the RCRA hazardous waste criteria (as described in Section 2.1.1), the wastewater will be transported to a Navy wastewater treatment plant for disposal. If contaminants in the purge and development water exceeds RCRA criteria (see Section 2.1.1), the water will be classified as a hazardous waste and the activity (NAS Whiting Field) will be responsible for appropriate disposal.

2.1.3 Decontamination Fluids IDW in the form of decontamination fluids will be discharged onto the ground within the AOC and allowed to percolate into the ground. Care will be taken to assure that the liquid waste does percolate into the ground and does not flow into surface waterways such as ditches, curbs, or swales.

2.1.4 Personal Protective Equipment (PPE) and Disposable Equipment (DE) PPE (gloves and tyvek suits) and DE (tubing, respirator cartridges, etc.) will be used only at selected sites. PPE and DE may be disposed of in one of two ways. If non-hazardous, PPE and DE will be double-bagged and disposed of in a OLF Barin dumpster. Or, if contaminated, used PPE and DE will be drummed, labeled, and

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stored at the Facility and the activity will be responsible for appropriate disposal.

The FOL will determine in the field if PPE and DE are to be drummed and sent to the HWSF or double-bagged and disposed of in a local trash dumpster. The FOL's decision will be based on the contamination exposure level encountered at each site.

2.2 SITE-SPECIFIC IDW MANAGEMENT

Table 2-1 presents the anticipated IDW generated from the RI field program and disposal methods associated with each site at OLF Barin.

2.3 EQUIPMENT AND LOGISTICS. The following sub-sections describe the type of materials and equipment that will be used at OLF Barin for handling IDW. Also outlined are responsibilities, and transportation requirements.

2.3.1 Containers The majority of the containers used onsite will be 55-gallon steel drums, (H or F type). The drums will be in compliance with U.S. Department of Transportation (USDOT), 49 CFR 173. Open head drums (H type) will be constructed of 16-gauge steel, top, bottom and body, as a minimum. Tops will be secured with a 12-gauge bolt ring, bolt, nut, and a sponge rubber gasket. Closed head drums (F type) will be constructed of 18-gauge steel, top, bottom, and body, as a minimum. F type drums will have two vents on the top, 2-inch and 0.75-inch, one for filling and one for venting.

Other containers that may be used onsite for monitoring well purge and development water storage include a water truck/tanker or 500 to 1,000 gallon high density polyethylene (HDPE) tanks.

2.3.2.1 Labels All drums containing IDW stored on-site will be labeled in accordance with USDOT requirements (HM-181).

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Drummed material will be clearly marked with the following information: Comprehensive Environmental Response and Liability Act (CERCLA) material, well number, and date containerized.

2.3.2.2 **Transportation** Onsite subcontractors will transport all liquid waste that has been drummed, stored in a tanker, or stored in a HDPE tank to a Naval Facility WWTP or HWSF. Transportation will be via pick-up truck, flatbed, or tanker, as required.

An onsite subcontractor will transport all drummed hazardous solid IDW to the base HWSF. Transportation will be via van or flatbed pick-up truck. ABB-ES will coordinate the drum delivery with the NAS Whiting Field hazardous waste coordinator.

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**Table 2-1
Anticipated Investigation Derived Waste (IDW) Disposal Methods**

Investigation Derived Waste Management Plan
Outlying Landing Field Barin, Foley, AL

Site	Drill Cuttings and Mud	Test Pitting Soils	Purge and Development Water	Decontamination Fluids	PPE and DE
19B	spread or bury within AOC	return to excavation	drum and empty into tanker	discharge on ground within AOC	onsite dumpster
20B	spread or bury within AOC	NA	drum and empty into tanker	discharge on ground within AOC	onsite dumpster
21B	pile, cover and analyze	return to excavation	pump on ground at the well	discharge on ground within AOC	onsite dumpster
22B	pile, cover and analyze	NA	pump on ground at the well	discharge on ground within AOC	onsite dumpster
23B	spread or bury within AOC	NA	pump on ground at the well	discharge on ground within AOC	onsite dumpster
24B	spread or bury within AOC	NA	pump on ground at the well	discharge on ground within AOC	onsite dumpster
25B	spread or bury within AOC	NA	pump on ground at the well	discharge on ground within AOC	onsite dumpster
26B	spread or bury within AOC	NA	pump on ground at the well	discharge on ground within AOC	onsite dumpster
27B	spread or bury within AOC	NA	pump on ground at the well	discharge on ground within AOC	onsite dumpster
28B	spread or bury within AOC	NA	pump on ground at the well	discharge on ground within AOC	onsite dumpster

Notes: DE - disposable sampling equipment
PPE - personal protective equipment
WWTP - wastewater treatment plant
NA - not applicable

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3.0 POINTS OF CONTACT

This section describes key roles in the management of IDW at NAS Whiting Field and identifies key points of contact.

3.1 ORGANIZATION.

Southern Division Naval Facilities Engineering Command (SOUTHNAVFACENGCOM).

SOUTHNAVFACENGCOM is responsible for establishing policy and guidance for the Comprehensive Long-Term Environmental Action, Navy (CLEAN) program. SOUTHNAVFACENGCOM awards contracts, approves funding, and has primary control of report release and interagency communication.

OLF Barin Environmental Coordinator (EC). The NAS Whiting Field and OLF Barin EC, Mr. Jim Holland, will coordinate and monitor IDW activities. The EC will provide local support and be the primary point of contact with the HWSF Manager and the local, State, and Federal regulatory agencies.

Southern Division Engineer-in-Charge (EIC). The SOUTHNAVFACENGCOM EIC, Mr. Ray Butka, is responsible for the technical and financial management of the IDW activities at OLF Barin.

Task Order Manager (TOM). The ABB-ES TOM, Mr. Rao Angara, is responsible for evaluating the appropriateness and adequacy of the technical and engineering services provided during the handling of IDW.

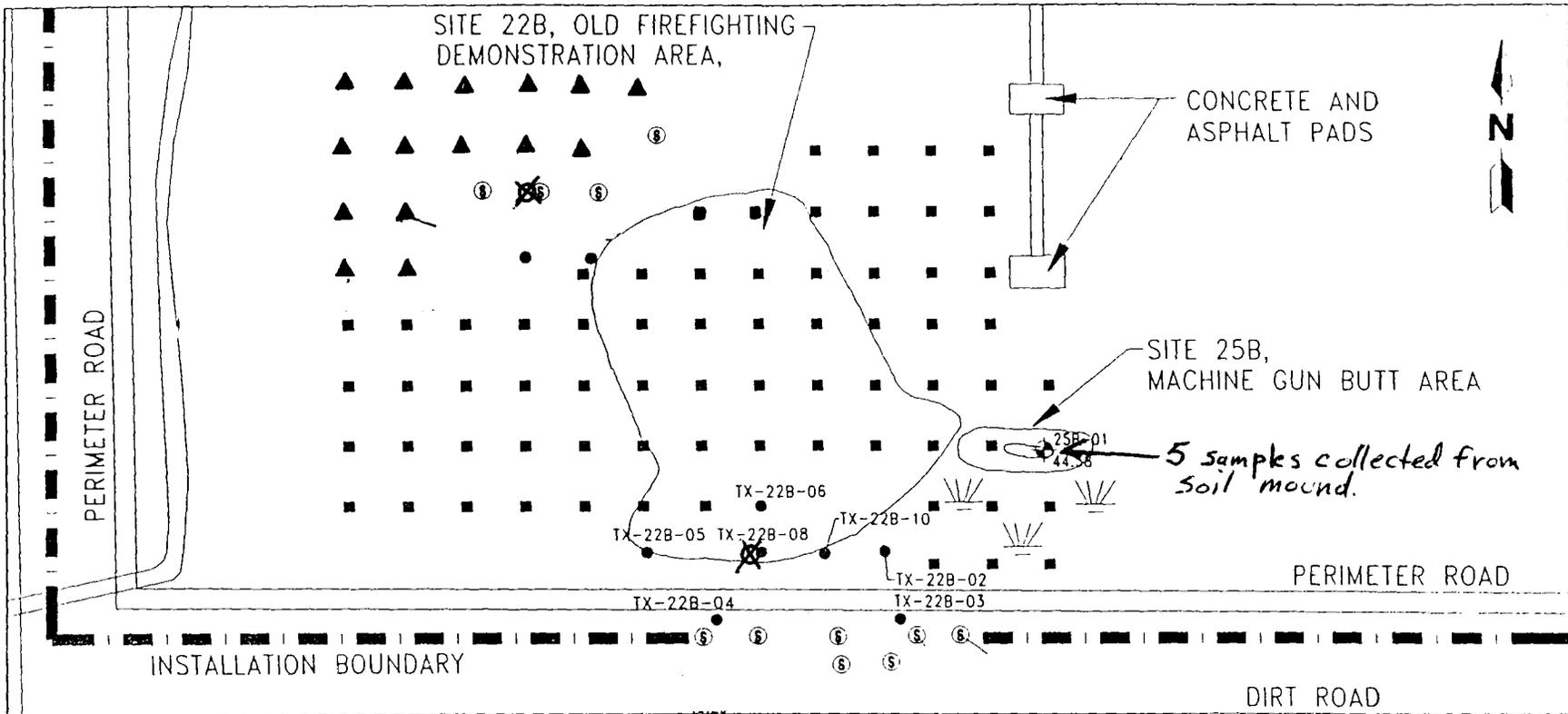
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Associate Project Manager (APM). The ABB-ES APM, Ms. Kathy Hodak, is responsible for the day to day activities including: overall management and coordination of field work, and supervision and scheduling of work.

RI/FS Technical Leader (TL). The ABB-ES TL, Mr. Gerald Walker, will be responsible for the quality and completeness of the IDW disposal data gathered during the field program.

3.2 IDW MANAGEMENT TEAM MEMBER LIST. The following is a list of phone numbers for members of the NAS Whiting Field IDW management team.

Navy CLEAN EIC	Ray Butka	(803) 743-0537
Whiting Field Environmental Coordinator	Jim Holland	(904) 623-7667
Whiting Field HWSF Manager	Jim Holland	(904) 623-7667
ABB-ES Task Order Manager	Rao Angara	(904) 656-1293
ABB-ES Technical Leader	Gerald Walker	(904) 656-1293
ABB-ES Associate Project Manager	Kathy Hodak	(904) 656-1293
USEPA	Michael Hartnett	(404) 347-3016
ADEM Project Manager	David Thompson	(205) 213-1300



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LEGEND

- Surface soil sampling locations
- Site inspection surface soil sample locations
- ⊕ Marsh area
- ▲ Proposed soil sampling Location
- Ⓢ Surface soil sample points
- ⊕ Monitoring well location
- | — | — Installation boundary
- ⊗ Proposed Soil boring Location

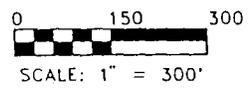


FIGURE 3 Proposed Soil Sampling Locations

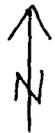
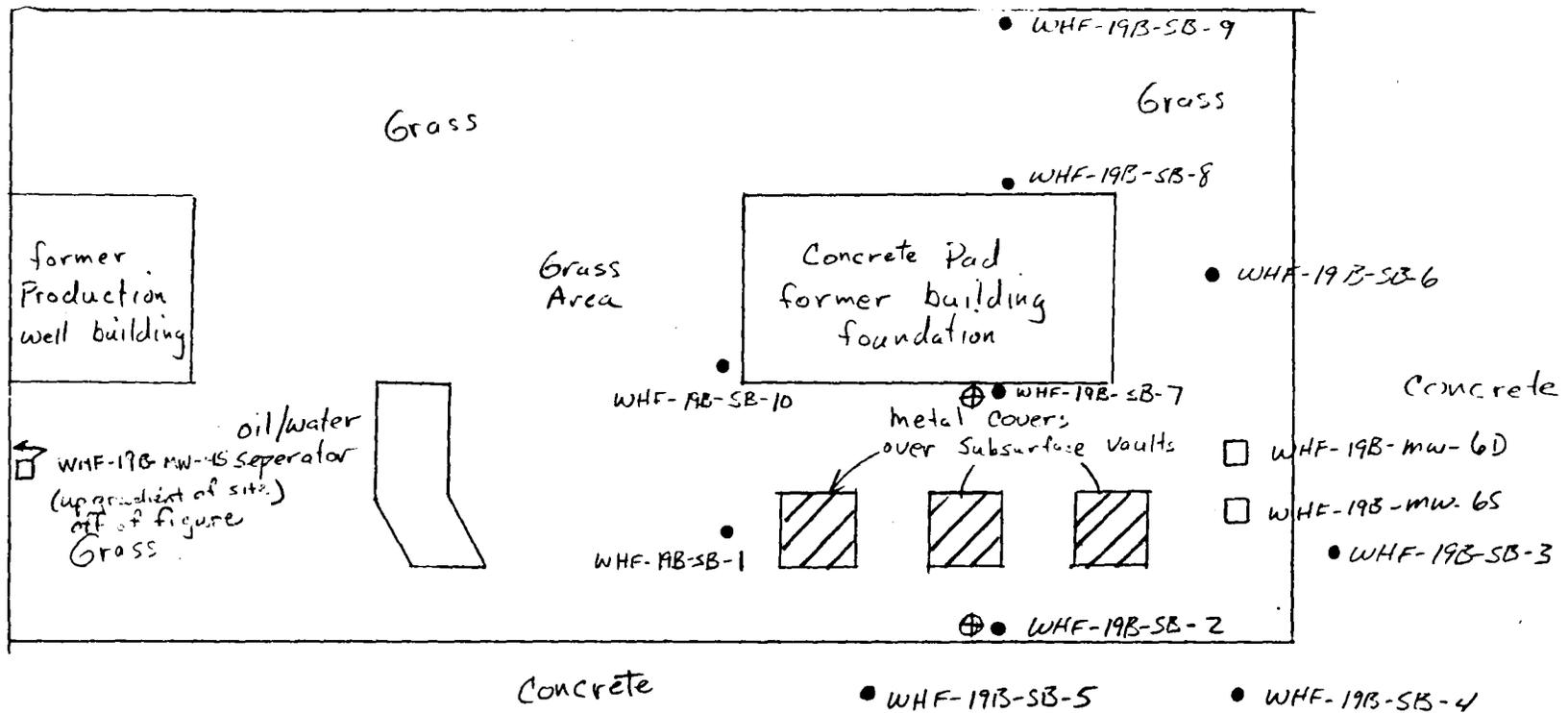


**TECHNICAL MEMORANDUM
 ADDENDUM**

OLF BARIN
 FOLEY, ALABAMA

Figure From: Remedial Investigation Shift Report, OLF BARIN, Foley, Alabama, August 15-19, 1994

Guadalcanal Road



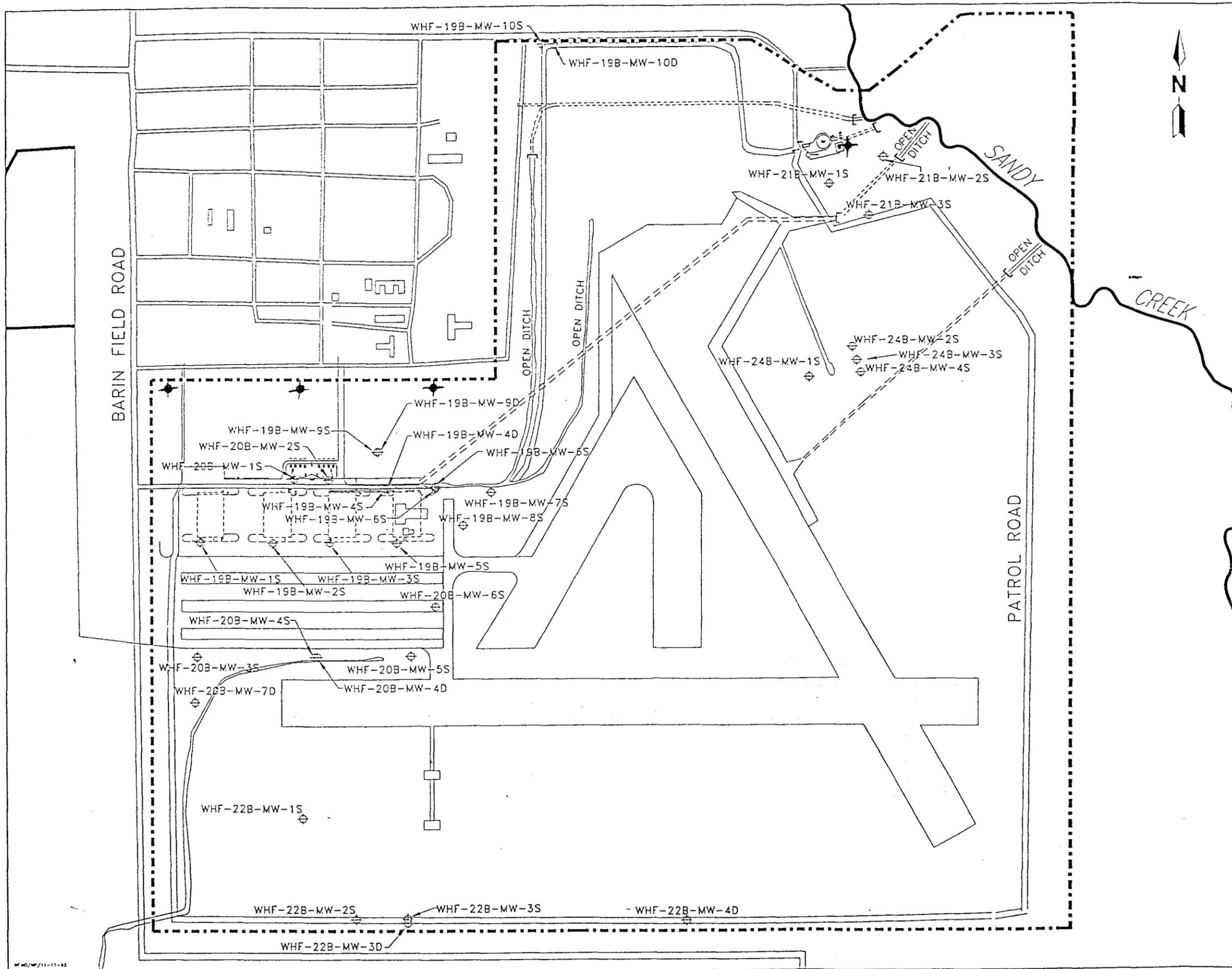
▨ Vaults contain valves, vents, and piping indicative of AVGAS System Under ground Storage tank

- Soil boring location and designation
- monitoring well location and designation

Not to Scale

Approximate monitoring well locations

Figure 1
Site 19B Proposed
Monitoring well locations
for UST Removal



LEGEND

- WHF-22B-MW-1S SHALLOW MONITORING WELL LOCATION AND DESIGNATION
- WHF-22B-MW-1D DEEP MONITORING WELL LOCATION AND DESIGNATION
- Proposed monitoring well location
- INSTALLATION BOUNDARY
- SWAMP AREA
- UNDERGROUND STORM SEWER
- AIRCRAFT RUNWAYS AND TAXIWAYS

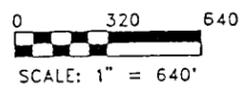


FIGURE 2 Proposed monitoring well locations for Additional Investigation



TECHNICAL MEMORANDUM NO. 4,
GROUNDWATER ASSESSMENT

OLF BARIN
FOLEY, ALABAMA